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The New Merger Procedure

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A Policy for Mergers: A Report

Mergers are a growing problem calling for a sound policy. Here is an analysis of new ALPA merger procedures adopted by the 13th Convention.

By F. W. Saul

ALPA Merger and Seniority Committee

Industry throughout the world is in an age of merger and consolidation. Many business experts regard this trend as one of the most striking aspects of our current economy.

There are many reasons for mergers —practically as many reasons as there are mergers. Whatever the reasons, there is every indication that the trend will continue, not slacken.

The air lines, a young and growing segment of industry, exemplify this trend. The Air Line Pilots Association has long recognized that this industry's growth process will entail a certain number of mergers or consolidations of individual air lines or parts thereof. Inherent in each of these mergers or consolidations are a multitude of seniority adjustment problems for the pilot employees of the affected air lines.

Tomorrow your air line could very well be involved in a merger and a workable, well-defined Association merger policy and procedure will then assume profound significance for you, even though, at this moment, its application to you may seem remote.

An Obsolescent Policy

In the past, the Association has attempted to obviate merger problems by accepting various general definitions of seniority and by ruling that application of certain declarations of policy and procedure shall govern pilot conduct when seniority merger disputes exist. It is apparent that these well thought-out policies and procedures have not fulfilled their purpose. Every merger of seniority lists has resulted in pilot dissatisfaction and extended bickering accompanied, in most cases, by expensive litigation attempting to overthrow or invalidate the final seniority award.

Year by year it has become more apparent that workable merger policies and procedures are a requisite of total Association unity.

Two Things Important

With a little analysis, it becomes evident that an ideal merger policy and goal includes only two things, really—both simple to state, but neither easy to attain:

- Protection for pilots as a group against the economic pressures involved in a merger.
- Equity of treatment of individuals in application of those group protections.

Over a period of years, ALPA, by intervening before the CAB as an interested party in all mergers, has made progress toward the first goal by establishing now well-precedented employee protective conditions in merger approvals.

With that established, the second point becomes an exclusively intra-Association problem—one that cannot be solved by an outside agency, but requires a solution coming from within our own ranks.

That requires a definite Association merger policy—flexible enough to be adaptable specifically to each case; at the same time, broad enough to be generally applicable to them all.

Committee Appointed

In accordance with a resolution adopted by the Board of Directors, the Executive Committee, on April 23, 1954, appointed a seniority committee of five members.

(Editor's note: This committee was composed of: F. W. Saul, PAA, the author of this article; C. E. Cochran, Ozark; W. E. Fallon, UAL; S. E. Pangburn, AA; and C. H. Ruby, NAL.)

The Committee spent many months searching for a program that would meet these requirements. Both open and closed sessions were held. Pilot representatives from both air lines that have merged or air lines that anticipate merging were interviewed. Any other pilot who wished to express his views on the subject was heard as well. Methods used in previous mergers were studied in an effort to pinpoint all the problems.

What Committee Studied

In its study, the Committee attempted to evaluate many summaries, briefs and decisions relative to every merger that has taken place since ALPA was

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Ed Modes, Editor

The Merger Committee spent months studying . . .

founded and considered the following:

▸ Method of seniority integration of major trunk carriers after consolidation of predecessor companies into one major corporate entity on United, American, Pan American, Capital, and Eastern.

▸ Mergers consummated after the air lines were parties to and subject to the terms of negotiated working agreements. These were: Western-Inland, in 1944; Monarch-Challenger (Frontier), in 1949; Pan American-AOA, in 1950; Braniff-Mid Continent, West Coast-Empire, and Delta-Chicago and Southern, in 1952; and most recently, Flying Tiger-Slick in 1954.

▸ Previous attempts of ALPA to establish a satisfactory merger policy. These consisted not only of the policy established by the Fourth Executive Board, adopted by the Eleventh Convention and reaffirmed by the Twelfth Convention, but of all past policies adopted by the Association from 1934 on.

This current Committee, unlike predecessor committees, had access to pilots and records involved in controversial merger integrations.

What They Found

After this comprehensive study of the seniority merger problem the committee had to acknowledge that they could not recommend the adoption of any single, inflexible rule of seniority that could equitably be applied to any future seniority dispute without recourse. It was apparent that seniority, when defined as the means of combining two lists, has as many and varied definitions as there are pilots on the air lines. Even the proponents of the length-of-service rule were dismayed at the number of conflicting ways length of service had been and is being determined on individual air lines and at the resultant havoc the application of a set, inflexible rule would inflict on their own seniority list.

The committee had to recognize the sincere convictions of each individual, expressing his concept of seniority and what it entailed, as the major deterrent to the adoption of any rule or set of rules as Association policy for seniority mergers.

Another fact seemed very clear to the Committee. As the great majority of the integrated lists were merged as a result of arbitration, the general pilot dissatisfaction must stem from some defect in the arbitration machinery. In arriving at this conclusion, the committee did not mean to detract in any way from the value or acceptability of the arbitration procedure as an orderly and due process of law for the settling of disputes. In the opinion of the committee, the fault was not in the procedure, but rather in the complexities of air line seniority with all of its ramifications and with the neutral's unfamiliarity with air line seniority and operational problems.

Other Conclusions

Certain other conclusions were also bound to be reached and these findings were the ones that were ultimately applied to recommendations for a merger policy that would give individually affected pilots an expressive voice in the method to be used and the Association itself a clear-cut procedural guide.

Briefly stated, some of the other significant conclusions coming out of the committee's study were:

▸ Pilot groups will not willingly submit their rights, their jobs, and their security to a procedure and policy which they feel does not allow for, or disregards, consideration of the facts and merits of their particular case. However, they will accept policy and procedure which does allow for the free expression of what each side considers equitable and just and allows final determination on the basis of fact and merit.

▸ Of all the cases studied and ana-

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. . . and then made recommendations to the Convention

How Merger Machinery Operates

Purpose: Integrate Pilot Lists

Method

1... Pilots Indicate Their Desires

How: By ballot indicating their preference in method of integrating Seniority List.

When: Annually, concurrent with LEC elections, but choice may be changed prior to merger.

2... President Sets It in Motion

How: By notifying MEC's to meet and take proper steps to activate the procedure.

When: Whenever he deems merger or consolidation of air lines or parts thereof to be pending.

3... The Representatives Confer

How: By electing one first pilot and one copilot seniority representative from each air line.

When: Representatives named within 10 days of government approval; meet within 30 days of government approval.

4... Mediation Comes Into Play

How: Invoked by President who appoints himself, staff member, or officer as mediator.

When: Any time after negotiating progress reports indicate progress is not satisfactory.

5... Arbitration as Final Step

How: Before Board composed of two pilot representatives selected from ALPA Master list and a neutral agreed upon or appointed by NMB.

When: Mandatory 45 days after gov't approval. Board convenes within 75 days after O.K. Renders binding decision in 120 days after approval.

RESULT: ONE SENIORITY LIST

(Continued from Page 3)

lyzed, there are only two that have been determined solely by agreement between the affected pilots, the rest being decided in arbitration proceedings. There has been ample evidence that the pilots had unlimited opportunity through direct negotiation to apply any particular policy or formula which they could agree upon. In all cases, without exception, application of a fixed rule or method was unacceptable, and agreement was reached only after inequities were adjusted by exceptions to the rule and variations of the principle.

▶ Because of the multiple and varied definitions and interpretations of seniority, regardless of the manner in which two seniority lists have been merged, it is almost impossible to satisfy a majority of either of the two groups affected.

▶ Organizational discipline is important. Other industries of a similar nature or structure have had this problem even longer than the air line pilots. Some railroad organizations, for instance, fought this issue for years before finally establishing a permanent committee to hear and rule on disputes of this nature. Such self-imposed discipline is essential to solution of the problem.

▶ Arbitration has certain very obvious drawbacks, but it is an accepted right that should not be abrogated but retained with remedy of its deficiencies to make it realistic and responsible.

▶ To be effective, machinery and procedures must be available and active coincident with the progress of a merger through all of its various steps.

Remedying Defects

These were essentially the factors determining the merger procedure machinery set up by the 13th Convention:

In an attempt to remedy the defects apparent in past Association procedure for the settling of seniority merger problems, the committee recommended the adoption of an amended procedure which hopefully will keep the final agreement or award within the acceptable bounds or limits of our seniority concepts.

This new procedure, for the first time, provides a means of determining the length of service credit to be accredited each affected pilot and provides a means of compromising the differences the affected pilot groups may have as to the method or reference used in the computation without altering the relative position of the pilots to each other on their respective lists.

This procedural step was included because the committee recognized that the length of service of a pilot was one of the most important factors to be considered when attempting to integrate two seniority lists by any method and some means should be provided whereby the correct and acceptable method of computation could be decided.

The amended procedure does not attempt to enumerate any particular factors to be considered by the parties nor does it attempt to evaluate one factor over another. The committee felt that evaluation of factors could be best assessed by the parties involved under their particular set of conditions or by an arbitration board made up of at least three members, two of which should be neutral pilots familiar with the complexities of air line seniority and air line operational problems.

They will be balloted by the Home Office to determine which of two alternative methods they desire. On this basis, pilots will choose between:

▶ Method No. 1 — Compilation of seniority lists "solely on the basis of length of service as a pilot with the respective air lines, without disurbing their relative position on their respective current seniority lists."

▶ Method No. 2—Integration of lists "determined on the basis of the problems and factors peculiar to the merger, without disturbing their relative position on their respective current seniority list."

Procedural Machinery Still Available

Thus, pilots who have elected to integrate their lists according to Method No. 1 may do so by applying the length of service principle. Disputes arising will be adjudicated by the subsequently outlined step-by-step procedure.

. . . Continental-Pioneer Merger is first application of new policy

How Machinery Is Set in Motion

Undoubtedly, a brief explanation of the mechanics of the new policy will answer in advance many questions as to how it will actually operate in practice. All told, there are really five phases involved in the procedure: (1) setting the machinery in motion; (2) determination of pilot desires; (3) negotiation; (4) mediation; and (5) arbitration.

The Convention action empowers the president to set this machinery in motion. When, in his opinion, a merger or consolidation of air lines or parts thereof is pending, he will notify the MEC of each affected air line that, in accordance with this procedure, it is their responsibility, as representatives of the affected pilots, to meet and activate the Association procedure.

Determining Pilot Desires

Each pilot will have a strong voice in determining the method by which he wishes seniority lists integrated.

In cases where the pilots have elected the second method, or dissimilar methods, the procedural machinery will apply.

This method of balloting will provide a continuing means of determining pilot desires and wishes. It will be held with each regular LEC election. In tabulating the results, a majority of votes cast for each method shall govern for the pilots' respective air lines and each air line shall be listed under the category elected by the majority. The Association will provide every member with a report indicating the method selected by each air line.

The choice may be changed each year but regardless of the method chosen the pilots are not committed to that particular method in the event they again wish to change prior to ac-

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Mail by Air---A Better Way

The air lines have earned the right as first class mail carriers when judged by the historical criteria: "Does it provide better postal service for the U. S.?"

By Ed Modes

Editor, The Air Line Pilot

First-class mail by air? That's a burning question right now.

Because of the controversy which does surround it, you'll find you have to wade through a lot of opinion to get down to the facts.

But after this spadework, anyone who cares to do it will discover plenty of good and logical reasons why the answer should be yes and few, if any, valid ones why it should be no.

In just about a year of the first-class-mail-by-air experiment now, it has been proven:

- It is fast—many, many times faster than surface transportation.
- It is economically cost competitive with surface transportation.
- That the air lines have the air lift capacity to handle it.
- Most importantly, there is a public demand for it.

Actually, there should be no controversy about it. Strangely enough, there is.

Main attack, of course, comes from the Railroad Industry who want all non-surcharge mail reserved for the surface carriers. They appear to mean business and have pretty well already chosen their battleground—the courts and legal weapons; Congress and legislative weapons.

It's Not a New Fight

What is happening, has happened before many times. As a matter of fact, it has happened practically every time a faster and better method of postal transit has replaced an old and outmoded method.

History, it would seem, is on the side of the air lines. Better postal service for the public has always been an American tradition. It began with the Declaration of Independence.

Under British Dominion, the Colonial postal service was treated as a means of exploitation of the Colonials, first for private profit and subsequently to provide revenues for the Crown. The postal service, like the tax stamp, was a means of raising revenue. The result was that the Colonials took to bootlegging the mails. And one of the first actions of the Continental Congress was to establish a government-supported postal service for the use of the people and for the development of the country. (Benjamin Franklin was the first Postmaster General.) Later on, the Constitutional Convention again affirmed the principle of a postal system as a service for the people.

First Improvement Came Early

Even before the Constitutional Convention (in 1786), the first major improvement was made in conveying the mails—because a better, faster way came along. Prior to 1785, post riders had transported the mail. But in 1785, the Postmaster General was authorized to contract with stage lines to perform that service.

There were protests at the change, of course. The protests were overruled. George Washington, making the point that the Postal Service could help to develop the country by helping to support the stage lines, was one who argued against the objectors.

"It has been understood by wise politicians and enlightened patriots," he said, "that giving a facility to the means of traveling for strangers and of intercourse for citizens was an object of legislative concern and a circumstance highly beneficial to the country."

In his report to Congress on November 29, 1834, Postmaster General W. T. Barry formally stated the policy which had guided the operation of the United States Postal Service previously and has continued to guide it since: "The celerity of the mail should always be

A special pouch inaugurates N. Y.-Miami service.

equal to the most rapid transition of the traveler."

Switched to Rails in 1838

When railroad construction was begun, the nation was as prompt, as it had been in the case of the stage lines, to promote their growth. In 1838, all railroads were made "post routes," a premium was paid, too, for the improved service.

Again, protests, which were met in 1845 by the House Ways and Means Committee with this statement: "No doubt is entertained as to the obligation of the government to lay hold of the best and most rapid methods of transmission. It is not without full reflection that this Committee insists on the principle that it was the duty, as well as the right, of the Government, to avail itself even at additional expense, of the powerful, for the purpose of accelerating the mails."

Recognition of the airplane as a potentially better method of transportation of mail came during the comparative infancy of the industry.

As early as May 15, 1918, the Post Office, in cooperation with the army, instituted a regular operation between New York and Washington. When Army cooperation ended in August, the Post Office carried on until 1926. The Air Mail Act of 1925, as amended in 1926, then made it possible for the post office to utilize the services of private contractors to accelerate the mail. The Civil Aeronautics Act of 1938, faithfully preserving the nation's postal tradition, required the Postmaster General to tender mail for transportation by air, to the extent required by the postal service.

These historical arguments favoring adoption of air transport for letter mail are, it cannot be denied, based on the assumption that it will provide better, faster, more efficient postal service for the public.

A "Success Story"

We could probably very easily say "Yes, it does" and let it go at that as a very obvious conclusion. But a more potent answer is the success story of the experimental carriage of letter mail by air.

The experiment began back in October, 1953, on heavy-volume mail routes between Chicago, New York and Washington. Then it was extended to include certain Florida cities; finally, late last yar, to the Pacific Coast.

Every indication has been that the experiment is sound and succeeding.

During the first year of the test in the East, senders of letters saved nearly

The first-class-mail-by-air experiment began between Chicago and the East last October. Shown here are scenes during arrival of some of the first mail under the Post Office experiments which have been called a success. Service has now been extended to west coast areas.

10 billion hours of delivery time, with hundreds of millions of letters reaching destinations on an average of 11½ hours sooner than if they had moved by surface.

Reduced to specifics, what the improved service can mean to businessmen corresponding with distant customers and to people writing to distant members of the family can be seen in the fact that a letter traveling across the country from New York to Seattle takes 60 hours and 15 minutes by surface as against 11 hours and 45 minutes by air. Even in shorter distances, the time saved is impressive. For example, a letter between Chicago and Minneapolis takes 6 hours and 45 minutes if it goes by surface, but only an hour and 2 minutes if it goes by air.

Projection Impressive

Definite figures on the Pacific Coast letter mail airlift, inaugurated November 22, 1954, are not yet in but estimates of what it will mean in speedier postal service have been conservatively projected.

The time savings here, it is claimed, should save nearly 8 hours in over-all transit time between San Francisco and Los Angeles, around 18 hours between San Francisco and Seattle and more than a day—27 hours—between Los Angeles and Seattle. On the estimated volume of mail that will move between various West Coast cities, the savings will total one and three-quarters billions of hours.

Another factor involved is that air-carried letter mail returns the post office a profit and would continue to do so even at higher rates than the experimental ones the air lines now receive.

According to the Post Office Department's cost ascertainment report, the Post Office Department paid the railroads 30.24 cents per ton mile for transporting letter mail. Since that time the railroads have gained a 10 per cent increase, which would bring the rate up to 33.26 cents per ton mile—a figure much higher than the current experimental rates.

Big Profit Returned

During the first year of the experiment, the Air Transport Association reports, the air lines received $1,830,000 for carrying the mail between the points affected while returning $27,670,000 to the Post Office.

In addition, a study of the New York - Chicago and Washington - Chicago experiments shows that on an annual basis, 7,380,000 ton miles of surface mail would be transported by air.

Thus, it is plain that the taxpayer not only receives better mail service, but is saving in cost taxwise at the same time.

An important reason why the Post Office Department can afford to ship surface mail by air are the rates necessarily charged by the railroads for RPO (Railway Post Office) cars, the cars in which mail is distributed between stations.

This distribution space costs the Post Office from $6 to $41 per square foot per year as against $2 for stationary space at terminals. Thus, the experiment may demonstrate that, due to the speed of air transportation, the need for distribution in transit can be eliminated on many routes and the distribution made at terminals where space is cheaper. In addition, the time of employees can be better utilized and their travel expense eliminated.

Objections Answered

Of the objections advanced against first class mail by air, most of them can be easily brushed aside.

One, of course, is loss of revenue by the railroads. Understandably, the railroads object to any diversion of postal revenue. But it does not appear that carrying of first class mail by air, which accounts for only 2/5s of 1 per cent of the railroads' net income would seriously damage them financially.

Another claim sometimes heard: that the users of 6c air mail are, in effect, being gypped, because they're paying extra for the same service someone else is getting for half of that. This could be true if letter mail wasn't handled on a deferred basis as it is. If sufficient space is available—as it has been up until now on the experimental routes—all senders of 3c mail do benefit. But they are not assured of this benefit. Only 6c air mail has absolute assurance of air carriage.

Air lines claim the charges that they are transporting surface mail at unreasonably low rates, 18 to 20 cents per ton mile, as compared to an average of a little over 45c per ton mile for air mail are of no consequence.

They will admit they may not be adequately compensated on the basis of the profits they have shown for the Post Office.

The Air Transport Association says: "The rates now being paid for the transportation of surface mail are purely experimental and their ultimate level will be fixed after an investigation by the Civil Aeronautics Board, which will be inaugurated shortly. Moreover, the railroads cannot fairly compare the rate we receive for air mail and the rates we receive for surface mail, because we transport surface mail on a deferred basis, while air mail carries a priority over everything else in the airplane."

Still another claim by those opposing the new mail policy: the Congress has established the policy that 3c letter mail shall move by surface means and therefore this mail cannot be moved by air without additional legislation. Without getting involved in a lot of complexities, here is the situation which seems to counter this argument: the solicitor of the Post Office Department determined that the Postmaster General had power, under existing laws, to put 3-cent letter mail on the air lines. This opinion was submitted to the Comptroller General, and was approved by him. The Comptroller General is regarded by the Congress as its agent in passing upon the propriety of government expenditures.

An Official View

In the eyes of the one man who is in an important position of vantage to judge the new-era mail venture, it has been a success.

Postmaster General Summerfield says: "These operations have been successful to date, both in speeding mail and economy." Who can speak more authoritatively?

The entire mail by air question is not, in the final analysis, a wrangle between the air lines and the railroads.

It is actually a question of full utilization of progress that will benefit the people and the nation by better postal service. Throughout history, few people or organizations have long withstood the pressures of progress. It is time for the airplane to take its full place in the transportation of mail—strictly because it has earned it and proved its right to it as a better way.

U. S. Should Keep Pace

If the experimental services recently inaugurated prove as successful as those now operating for a year, there is no point to not extending improved services to other cities, particularly since the air lines of the U. S. today operate into some 600 cities and towns.

America is not a second-best country. Nor should its postal service be. Today, in such countries as Canada, India, Denmark, France, Great Britain, Ireland, Norway, Sweden and Switzerland, the people are enjoying the advantage of having all ordinary first-class mail moved by air. Is anything less good enough for the U. S. or its citizens, who, when all is said and done, are the ones for whom the postal service was created?

What's Being Done About ATC Problems?

Air Traffic Control really covers 10 or 12 intricately interrelated areas. They're being studied in that light now in an effort to find a solution to the overall problem.

By Capt. W. A. Jensen

ALPA Representative on Air Navigation Committee

Before we get too entangled in Air Traffic Control problems, we had better define what we are talking about. Air Traffic Control is defined in the ANC Manual "Procedures for the Control of Air Traffic" as "A service established by competent authority to promote the safe, orderly and expeditious flow of air traffic." I mention this because quite often when Air Traffic Control is discussed, the first impulse is to think of traffic control as being the control of IFR traffic by centers—air route traffic control. You will note that the definition includes both towers and centers and VFR as well as IFR traffic. This is especially important because the so-called VFR traffic problem is one of the most important and one of the most difficult problems facing us today. This is the problem of preventing collision and near-collision between VFR flights and between VFR and IFR flights and even between certain IFR flights. With the greatly increased numbers of aircraft now in use and the increased speeds of the newer high performance aircraft—airline as well as military jets—the see-and-be-seen principle of VFR flight is rapidly becoming inadequate. We were recently told by a representative of BOAC that after more than a year of Comet operations, and in spite of the fact that accurate position and altitude information are exchanged between passing Comets, no Comet pilot has ever seen another passing Comet in the daytime outside of the terminal areas.

The VFR Problem

This VFR problem, as well as all the IFR traffic control and navigation problems, has been under study by a Washington group known as Special Working Group 13 of the Air Coordinating Committee's NAV Panel.

I am participating in this study along with representatives of the CAA, CAB, Air Force, Navy, Coast Guard, Army, AOPA, NBAA and others. Although the work is not complete and no conclusions have been reached, as your ALPA representative on this committee, I would like to report on what we have been doing. The first job was to determine what specific problems exist. Having once done this, the plan is to find out what is already being done which will help solve these problems. Then it will be possible to find out what still needs solution.

Not An Easy Risk

The task of spelling out the problem was not an easy one. Just from the definition of traffic control it was obvious that some of the major problems would result when the safe, orderly and expeditious flow of traffic was not accomplished. In our present draft, we state the safety problem like this "the desired degree of safety in air traffic control is increasingly difficult to maintain. Safety is being maintained . . . at the expense of reducing air traffic flow to an exceedingly low rate during IFR and marginal VFR conditions. Failure to obtain the desired degree of safety is directly attributed to the fact that the system is overly complicated, the safe capacity is too low and the pressure on the pilots and controllers is too high."

The Delay Problem

When traffic is not moved expeditiously, we have the delay problem. The extreme of the delay problem occurs when it becomes necessary to cancel flights because of traffic control delays. In our committee, we have recognized all forms of delay—the initial delay in obtaining a departure clearance, delays incurred in climbing patterns, circuitous routings, enroute holds and approach delays. We learned of a new twist to the approach delay problem which took place over Columbus, Ohio, recently. A jet called Columbus for an expected approach time. He was given approximately a twenty minute delay. He requested expeditious handling because he was somewhat low on fuel. After twenty minutes had elapsed, he requested approach clearance and was told that there was still some traffic ahead of him. He declared an emergency because of fuel shortage and the traffic below him was cleared to open quadrants so that the jet could be cleared down. As soon as the other traffic was clear the jet was cleared for approach but no acknowledgement was received. After many calls over a five or ten minute period, the jet pilot answered that the emergency could be terminated—he had met a tanker, also on top, and had refueled.

Another problem we have recognized is the so-called multiple airport terminal area problem. This is the problem of expeditiously moving the traffic into or out of an area where there is more than one major airport. By using radar traffic control, we feel that we know how to do a fair job of feeding traffic into and out of a single airport but now the problem has moved out to the area in which the traffic from and to several airports must be unscrambled.

Other Considerations

Without going into detail, we are also considering such things as the lack of flexibility in the present traffic control system, the inability to get the routes and altitudes requested, the inability of the present system to adequately cope with certain military operations, the jet problem and the helicopter problem. We have found that all of the problems I have mentioned are intricately interrelated. The delay problem cannot be separated from the multiple airport problem, for example. In an effort to deal with these interrelated problems, we expect to end up with ten or twelve problem areas which need solutions. Chief among these presently appear to be: Navigation, communications, controller coordination and the use of long-range radar. We feel confident that if we can develop solutions or even partial solutions to these problem areas, we will be contributing greatly to safer and better traffic control.

Improving Aviation Weather Services

Instrumental developments may allow the meteorologists to more effectively meet the weather service needs of modern day aviation.

By R. H. Simpson

Aviation Specialist, U. S. Weather Bureau

Aviation services of the Weather Bureau tend to fall into three categories, the description, the prediction, and the communication of salient features of the weather. In each of these categories it has been all but impossible to keep abreast of requirements imposed by technological advancements of aviation. However, the meteorologist, who by now has become accustomed to having his intelligence flattered by requests for aircraft operational weather information, quite beyond the previous capabilities of the science to provide, is viewing with keen interest certain instrumental developments which may allow him to make more effective use of his talents in dealing with the weather service needs of modern day aviation.

The Transmissometer

Among the more important instrumentations now being perfected or tested are the transmissometer and rotating beam ceilometer. Together these present a more accurate description of obstructions to pilot vision during approaches to the instrument runway than has previously been possible for the observer to provide. These instruments have undergone exhaustive tests under low visibility approach conditions at McArther Field, N. Y., during the past two years. While the analysis of these tests is not yet complete, preliminary evaluations have left no doubt that this equipment is a major advancement in the field of aviation weather observations. At Washington National Airport the use of these instruments has very appreciably increased the acceptance rates during low visibility conditions. These equipments have recently been installed at Idlewild, and Newark and will soon be in operation at La Guardia. It is expected that other heavy traffic airports will also receive this equipment in the next few years. The transmissometer is usually installed at the end of the runway, the ceilometer at the middle marker, while the recorder-indicator for both are located in the tower with repeaters in the Weather Bureau quarters.

Another important tool is radar with which the observer is able to extend his vision for scores of miles. Most pilots know the advantage of radar in locating and avoiding turbulent sectors of storms. In addition the importance of radar as a tool in short range weather forecasting and severe weather warnings cannot be over-emphasized.

Presuppose Abilities

All weather forecasting techniques presuppose the ability first to describe accurately weather patterns at the time the forecast is made. In many sectors of the United States, observing stations are so far apart that weather bearing serious consequences to air navigation, can and frequently does develop and persist for several hours without being detected. Also while the forecaster may determine that conditions favorable for the development of thunderstorms, squall lines, damaging hail, tornadoes or freezing rain will be present, the outbreak of these phenomena is quite difficult to time accurately. Radar is capable of detecting the rain forms which characterize each of these in their early stages of development sometimes at a distance of as much as 200 miles, tipping the forecaster off to the first of what may be a chain of weather events of signal importance to his forecast, and may point to a need for special aircraft warnings. It may also enable him to brief pilots before takeoff concerning dangerous thunderstorms in the climb out zone, which are embedded and hidden from view in the overcast. Some types of radar can measure vertical distributions of rain and detect the freezing level. Others can measure the base and top of as many as three successive layers of stratiform clouds even when the clouds have no rain in them.

The Electronic Computer

The Weather Bureau already has installed radars at some 20 stations in the central and eastern states. In Texas the Bureau is developing a cooperative plan in which communities share the cost of modifying and installing radars which are being placed at every Weather Bureau station in the state. These radars, operating with a wave length of 10 cm. have an effective range of 200 miles. The large six foot dish antenna provides a beam width of approximately 3 degrees. This allows very adequate resolution of echoes on the 12 inch master PPI-scope.

In the weather prediction category, the electronic computer bids well to usher in a new era in the science of weather forecasting. The computer is not a mechanical brain whose versatility will allow the forecaster to be replaced by a clerk or mechanic. Rather, it is a device for assisting the forecaster with certain mathematical integrations so complicated and time consuming that at present they can only be roughly approximated or solved statistically. It may be of interest to review briefly the role which the computer is expected to play in weather forecasting. Weather forecasting consists of essentially two steps.

The Area of Error

The first involves extrapolating the movement of storm centers, of wind circulation and weather patterns. The second consists of evaluating changes in size and intensity of these systems. This second step is concerned primarily with accelerations, that is, acceleration of wind circulation, and changes in movement of storm centers. Virtually all serious forecast errors stem from incorrect estimates of the acceleration factor. While accelerations in the atmosphere obey the famous second law of Newton, they are not easily computed. For changes in circulation at one level are interrelated to, not interdependent of, circulations at other levels. It is therefore necessary in obtaining a complete solution to the problem of movement and changes in circulation to integrate the individual contribution at successive levels through a deep layer of the atmos-

phere. It is this function, at present handled only in a rather subjective manner by the forecaster, which will ultimately be handled objectively and with mathematical precision by the computer. The computer will not likely predict the beginning or ending of rain, or how many layers of clouds there will be. This will continue to be derived information for which we must look to the skilled forecaster. It is believed however, that the computer will predict with considerable accuracy such important basic information as wind components at jet levels, and the rate of intensification and movements of major storm systems. Our experience with the computer thus far leads us to believe that while it will not likely lead to more precise forecasting of run-of-the-mill weather, particularly for short periods, it may very well provide the means of eliminating almost all forecast errors of serious magnitude and consequences to aviation during major storm developments.

"Around the Corner"

Leadership in the field of so-called numerical weather prediction, using the electronic computer, has been provided by the Institute for Advanced Study at Princeton. In the past year, however, the Air Force, Navy, and Weather Bureau have been tooling up for a cooperative project using a computer which would be in operation early in 1955.

Finally in the field of communications there are also important developments just around the operational corner. At Indianapolis there is now being tested an electronic communications device which makes use of a magnetic drum to collect, store, and transmit weather and traffic control data. It operates at speeds up to 2,000 words per minute and can serve simultaneously several different communications systems with different operating speeds and characteristics. While time will not allow a full description of this very flexible system, it appears capable of solving most weather communications needs for many years to come and will make possible, at any given locality, the timely delivery of just those reports and forecasts which are needed, eliminating the vast duplication and waste of communications time which is inherent in our present teletype system.

With these developments, the forecaster can at last look forward with optimism to being able to cope more effectively in the future with requirements of the aviation industry for weather service.

Twilight Time

By Capt. Joe Hull

For the Captains Smith (Jr. left, Sr. right), a world of wings

The other day at National Airport in Washington a surprisingly spry man of 63, grey at the temples but in no other way giving evidence of his age, emerged from the cockpit of his airliner to the accompaniment of countless flash bulbs and the well wishes of a host of assembled friends. With erect carriage and an unhesitating step he descended the ramp to the ground.

Despite the outward festive appearance of the occasion, an air of melancholy was present because reporters and friends could not help but see the tears that welled up in the eyes of this pioneer pilot as he spoke modestly and with reminiscence of his long and colorful career. This was his last flight and he was sad. Today he was hanging up his earphones and putting his flight manual away for the last time, completing a career that had spanned four decades.

He was Captain Harry Smith of Capital Airlines, perhaps the oldest airline pilot in America, certainly one of the most beloved. This was the day to which he had looked forward for a long time; yet he must have hesitated to see it come, just as a Ruth or a Cobb or a Hornsby—champions all—had shrunk from that inevitable day when they would be up there taking their last cut.

At his side stood a handsome co-pilot, a man many years his junior but sporting four stripes, too, on his sleeves. If the young pilot beamed a bit proudly upon the man for whom he had just lowered the landing gear for the last time, the gesture was justified.

For the co-pilot's name was Harry Smith, Jr. He had asked for the assignment to his father's last flight, both as a sentimental gesture and as a token of respect for the man to whom he probably owes more than any other in the world.

It was all over in a matter of minutes. A moving drama; a professional man who had learned his art with the ancient birdmen and who had watched it undergo the changes that mean progress had come to the end of the trail which he had helped to blaze across the skies. It was a simple ceremony, his friends and colleagues milling about him, congratulating and felicitating him upon the conclusion of a long and useful professional life. Today he was retiring at the twilight of his career, going home from work for the last time, with only his memories.

It was a touching scene to those who had known him long and whose privilege it had been to work with him. The unusual event stirred latent emotions that are reserved by nature for only a few occasions in the normal span of human life.

Aviation is such a new industry that only in the past decade have its pioneers—traditionally young men are attracted to airplanes—begun to reach or outlive the Biblical "three-score and ten" years. Only now are some of the more durable veterans of the romantic age of flying coming to the maturity which must one day stop even the most enthusiastic of pilots, of whom Harry Smith was one.

It must have been a glorious experience, unparalleled in the history of human progress—and given to but few—to have lived with the airplane since its early days, when popular opinion said that none but the most foolhardy would venture forth in a flying machine.

With the end of this era the pioneers are passing and there is nothing more saddening in this modern day than to witness the inexorable march of time as it claims Harry Smith and others of his era, of which he will always remain a symbol to those latter day aeronauts whose lives, too, will be spent in a world of wings.

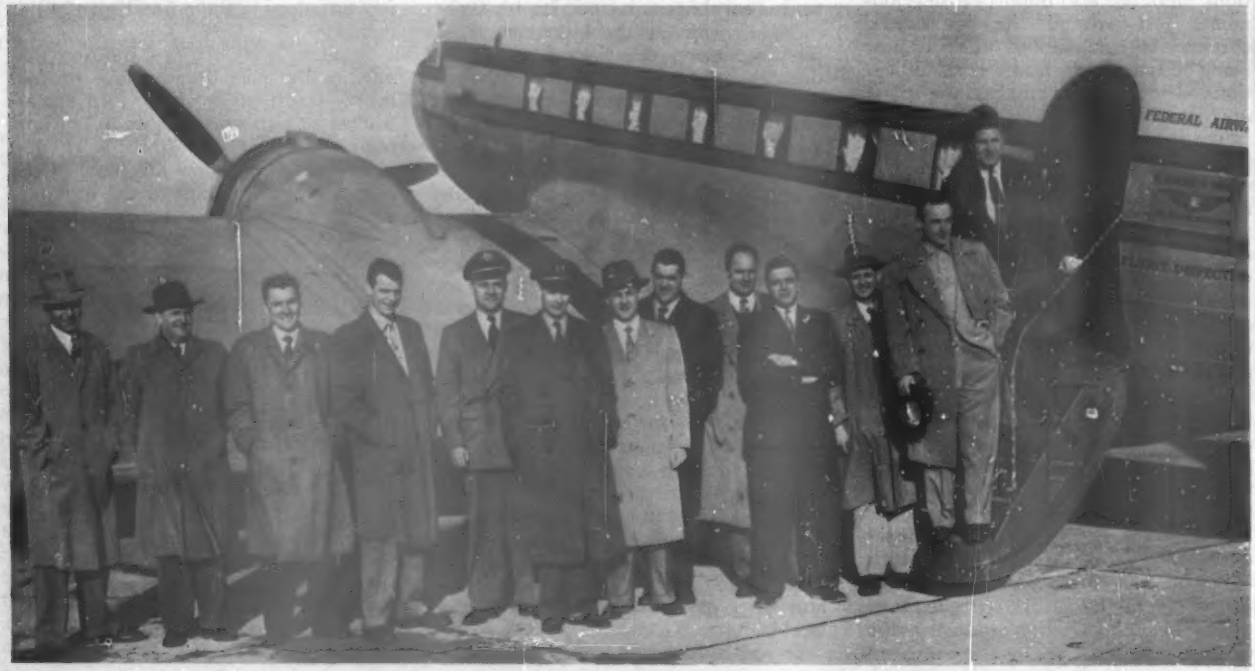
The ALPA CAMERA

Xmas

Left: The Home Office staff celebrates Xmas. Above: President Sayen receives gift from employees.

Safety

ALPA Representatives see demonstration of DME Off Course Computor and Pictorial Computer in CAA's DC-3



Legal

Pilots appearing at Federal District Court, Brooklyn, as witnesses in Cedarhurst Case.

Trackage

The Interchange and Trackage Study Committee meets at the Home Office.

Negotiations

The NWA Negotiating Committee Meets to discuss Agreement.

New ALPA Merger Procedures . . .

(Continued from Page 5)

tual merger proceedings. However, if two pilot groups who have elected method (1) merge and they retain the courage of their convinctions and accept integration by application of the length of service principle, the problem of compiling the single list will be minimized. The opportunity will now exist for those pilots who, by majority vote, have expressed their preference for the length of service principle, to apply that principle to future mergers in which they may be involved.

From here on, the process follows a familiar step-by-step progression beginning with negotiations and providing for mediation and arbitration.

Negotiation

At the negotiating stage, the MEC's as well as the individual pilots, will have direct responsibilities.

- Prior to the original date of Government approval, the Master Executive Council of each affected air line will appoint a committee to investigate and compute the cumulative length of service of each pilot named on their current seniority list. In this computation, they will utilize all available pilot and company records. The terms of the current working agreement for each air line will be applicable and will govern the computation of length of service credit for each pilot.

- After arriving at a length of service figure for each pilot, the Committee will forward, by registered mail, to each pilot individually, a statement of their finding and request confirmation of the length of service they have accredited to the individual pilot. It will be the responsibility of the individual pilot to challenge within a reasonable length of time, but in no case later than the original date of Government approval, the findings of the Committee in case of an alleged mistake, and to prove his protest by a written statement of fact and relevant evidence. The Committee will receive and evaluate the protests and will adjudge the validity of the claim. The decision of the Committee will be final as to these protests.

- The respective pilot seniority lists, and any data pertinent thereto, will be made available to all the pilot representatives for use in compiling an integrated list under the procedures. If the pilot representatives, after reviewing the method used in computing the length of service credit for each affected air line group, disagree as to the method of computation, they shall be empowered to compromise their differences to the extent necessary to reach agreement, except that the relative position of the pilots on their respective seniority lists will be maintained.

- Failing this, the disagreement shall be received by utilizing the mediation or arbitration procedures, regardless of the method by which the lists are finally integrated.

Mediation

Principal provisions governing the mediation phase of the merger policy are:

- Within ten days from the original date of Government approval of the merger, the Master Executive Councils of the affected air lines will meet and elect one first pilot and one copilot representative from their respective air lines. The Master Executive Councils will certify these representatives as having complete and full authority to act for and in behalf of the pilots of their respective air line for the purpose of compiling a single pilot seniority list.

- The representatives of the affected air lines will then meet at the Home Office within thirty days from the date of the Government approval and by direct negotiation reconcile all their differences as to method of integration and compile the single acceptable pilot seniority list. The representatives are required to report at least every five days to the President of the Association on their progress in direct negotiation. If, at any time after receiving the first report, in the opinion of the President, satisfactory progress is not being made, he will unilaterally intervene and invoke mediation.

- The Mediator can be the President of the Association or his appointee. If an appointee, he will be a member of the Home Office staff or an officer of the Association.

- If, within forty-five days from the date of Government approval, negotiations and mediation have not resulted in an integrated pilot seniority list, arbitration shall be mandatory, and such arbitration, except as specifically exempted, shall be conducted in accordance with the Arbitration Act of the State of Illinois as amended.

Arbitration

Here is how the arbitration stage is set up to settle those questions not adjudicated in one of the previous steps.

- The Arbitration Board will convene at the Home Office not later than seventy-five days from the date of Government approval of the merger. An exception: The President may, at his discretion, extend this time limit an additional fifteen days.

- The Arbitration Board will be made up of the two aforementioned pilot representatives from each of the affected air lines, two neutral pilots selected from a master list of pilots by the aforementioned representatives, and one neutral member agreed upon by said pilot representatives. If unable to agree within a time limit of 50 days after Government merger approval, the services of the National Mediation Board to designate a neutral member will be invoked.

- A current master list comprised of 25 first pilot and 25 copilot members who have consented to serve as members of a seniority integration Arbitration Board, will be selected and maintained by the Executive Committee (panel already selected by a Special Meeting of the Executive Committee, December 15, 1954).

- The pilot representatives from each of the affected air lines, failing to agree on two neutral pilot members of the Arbitration Board within 50 days from said date of Government approval, will select the neutral pilot Arbitration Board members by alternately striking a name from the master list until two are left.

- The respective pilot Master Executive Councils from the affected air lines are responsible for the presentations of their contentions regarding the merger and integration of the pilot seniority lists before the Arbitration Board. These can be presented as either oral or written evidence as deemed advisable.

- All members of the Arbitration Board will participate in the proceedings and in Executive sessions of the Arbitration Board. However, the voting will be limited to the agreed-upon or appointed neutral from the National Mediation Board and the two neutral pilot board members. A majority vote will decide the issues and the decision must be made and written in an Executive Session of the Arbitration Board, not later than 120 days after Government approval. It will be final and binding on the parties to the arbitration.

- Within five days from the date of award the integrated list will be accepted by the Association as the pilot

seniority list for the survivor company and the Association will initiate proceedings to negotiate this list into the Agreement between the surviving Company and the Association.

Concluding Comments

Just a final word of comment:

The seniority merger committee spent a great deal of time, effort, and thought on their assignment. They found that a good proportion of the pilots tend to oversimplify the problem and propose to solve it by a decree. The problem is not that simple. Each merger is a separate, individual problem, as complex and as deadly serious to the participants as life with its attendant responsibilities can make it. Our new procedure recognizes this fact and allows the participants to either agree on a solution or appeal to a neutral qualified panel which will consider the facts and merits individually and render a decision which will proportion the equities in a manner consistent with our concept of air line seniority.

Formulation of the merger policy involved a slow readjustment of thinking on the part of the Committee as we uncovered facts and problems of which we were unaware. We feel that the merger policy finally adopted is for the best interest of the Association and the pilots.

Full acceptance of this new procedural policy will likewise probably require a similar adjustment and evolution of thought on the part of many of you.

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Dangerous Cargo

As every pilot knows, little things can be dangerous—like this little bottle.

By John H. Thompson

Reprinted from Chicago Tribune

High over the Atlantic ocean, the huge four engined plane droned toward Europe. In the pressurized passenger cabin, tourists, business men, and world travelers chatted, dozed, or read.

They were several hours out from New York's Idlewild airport when the stewardess first noticed the strange, penetrating aromatic odor. It seemed to be strongest back near the baggage compartment, to which she had no access.

She sniffed again. The smell was either chloroform or ether. "Sabotage" flashed thru her mind and she went forward to the flight deck to tell the captain.

Captain Also Investigates

He, too, sniffed the air at the rear of the cabin and the odor was unmistakable. Both ether and chloroform are volatile, but ether is also highly inflammable. Ether loose in the plane held the danger of fire. Either of the anesthetics might put passengers and crew to sleep.

The captain radioed New York of the emergency and said he was returning immediately at full power and to stand by. Few of the passengers were aware of the change in course as he wheeled the plane slowly about for its return flight. All they knew as it came in for a landing was that an emergency had forced the big ship back to its starting point.

Ground Crew Works Fast

One of the passengers, a well known Chicago pathologist, and his wife, en route to the World Medical association meeting in Athens, Greece, were among the first to disembark. They saw the ground crew quickly open the luggage compartment and inquired why.

"Ether or chloroform is loose on the plane," said a tight lipped employe. "We suspect it might come from the passengers' baggage. Might be sabotage."

"Chloroform?" said the surprised doctor. "Why, I have a bottle in there in my suitcase."

He identified his luggage quickly. It was opened and there lay the empty bottle of chloroform. In the low pressure of high altitude, despite the pressurized baggage compartment, the highly volatile chloroform had expanded as a fountain pen will ooze ink under similar circumstances.

"And why is the chloroform in there?" demanded the plane's captain.

"Why," said the astonished doctor, "it's to take the adhesive tape off my mouth, of course."

There was a short silence. Slowly, almost reluctantly, the befuddled pilot spoke again:

"Doctor, I am a little dull at this moment. Can you explain more fully?"

"Certainly," replied the Chicagoan with a little gesture as if to dismiss the obvious, "I snore. So, at night, in order not to disturb my wife, I always tape my mouth shut with adhesive. That's why I carry the chloroform. It is an excellent solvent with which to remove the tape in the morning."

$500 an Hour Wasted

The pilot, a war veteran, thought of a number of remarks he might make. He mused about the empty bottle which had held 35 cents worth of chloroform and thought of the hours lost by his company, hours which cost $500 each to operate a trans-Atlantic air liner.

But the captain said nothing. He merely shook his head sadly as he climbed aboard once more, followed by the doctor and the doctor's wife. That night, many hours later, in Paris, the doctor quietly bought another small vial of chloroform before closing his mouth with tape.

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